

DISTRIBUTION OF SEA ICE OFF QUEEN MAUD LAND
FROM NOAA SATELLITE AVHRR IMAGERY
(ABSTRACT)

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The purpose of this study is to investigate sea ice distribution off Queen Maud Land on the basis of NOAA AVHRR data received from 1987 to 1989 at Syowa Station. These data are very useful for examining the mesoscale phenomena. There are several characteristics such as coastal polynyas and sea ice eddies in the image.

A coastal polynya was observed along the shelf break. Sea ice eddies were found at the ice edge which is located 60–200 km off the Antarctic coast from December to February. These eddies are characterized by horizontal scale of 30–50 km and small propagation of a few cm/s westward.

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PRELIMINARY STUDY OF THE G6, ANTARCTIC
ICE CORE (ABSTRACT)

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A 100 m-long ice core was extracted at Site G6, Antarctica (73.1°S, 39.8°E) by members of JARE-27 in 1986. The excellent quality of the core obtained by electro-mechanical drill makes it possible to examine the environmental condition of snow deposition by conducting combined physical and chemical core analyses. Preliminary studies were carried out on visual stratigraphy, bulk density and electric DC conductivity on the core surface. The results obtained show that the average interval of ice layer/crust and DC conductivity cycle are 11 and 10 cm of ice respectively. Bulk density data were treated so as to have the best-fit of the firnification equation (M. M. HERRON and C. C. LANGWAY, JR.: *J. Glaciol.*, **25**, 373, 1980) with data points under measured surface density of 0.38 g/cm³ and mean annual temperature of –40°C, which resulted in the accumulation rate of 10 cm of ice/a. These values are significantly higher than the accumulation rate of 6 to 7 cm of ice/a measured by stakes in the field (F. NISHIO *et al.*: JARE Data Rep., **137**, 49, 1988). Further studies by chemical analysis and stable isotope measurement on the same core are going to be made for investigation of the core chronology which reflects the depositional feature of snow at the surface of the ice sheet.

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